

ON SOME PHYMATIDAE IN THE AMERICAN
MUSEUM OF NATURAL HISTORY
(HEMIPTERA, HETEROPTERA)

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The major portion of this collection consists of common North American species of the genus *Phymata* Latreille, which in some cases are represented by very large series. There are, however, numerous Central and South American specimens; among these are some very rare and little known species which are worth noting. In the genus *Macrocephalus* Swederus, one species apparently is new and is being described herewith.

Subfamily Phymatinae Laporte

Genus *Phymata* Latreille

Phymata producta Hoberlandt

Figure 1

Phymata producta Hoberlandt, 1944, Zbor. Ent. Odd. Zem. Mus., Praha, vol. 22, p. 123, fig. 1.

One male from Rio Natal, Santa Catharina, Brazil, collected by A. Maller, January, 1946, is in the American Museum of Natural History collection.

The description of this species was based on one male specimen from Sao Paulo, Brazil. This is the second known specimen and likewise a male. The drawing of Hoberlandt is good. However, in the American Museum's specimen, which I have examined, the proboscis, formed by the frontal plates, is more constricted before the apex and the postero-exterior angles of the connexiva III, IV, and V are more protruding and more rounded. Hoberlandt placed *P. producta* near the *longiceps* group to which it is not related. It stands distinctly isolated in the genus and would probably constitute a separate subgenus. The fused frontal processes, forming the long proboscis, taper from the base to the apex, but the tip itself is dilated and truncate—a unique condition in the genus; the ocella processes are lacking

¹ I wish to express my thanks to Dr. Herbert Ruckes, through whose cooperation I was given an opportunity to examine the collection of Phymatidae in the American Museum of Natural History.

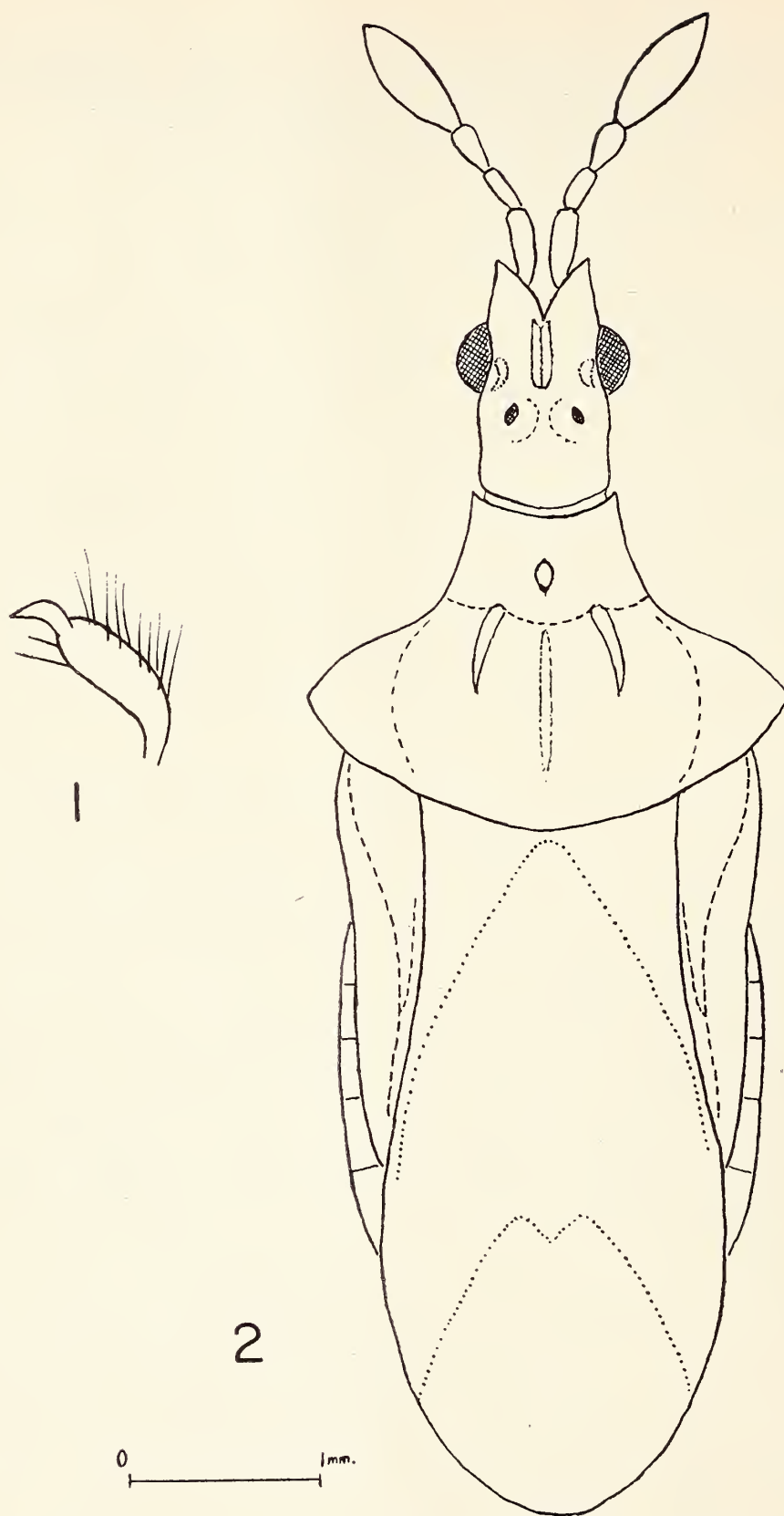


Fig. 1. *Phymata producta* Hoberlandt, male, right paramere.
Fig. 2 *Macrocephalus insignis*, new species, male.

and the ocelli are dorso-lateral in position, clearly visible from above; the posterior processes of the pronotum are also lacking; the median carina of the scutellum is vague, only at the base and apex is it visible as an obsolescent granulation; the scutellar disc is transversely rugose and the lateral borders rimmed, but without small teeth, the presence of which is so characteristic of the genus as a whole; the antennal excavation extends through the postero-lateral-posterior border (PLP-border); the postero-exterior angles of the connexiva protrude as rounded lobes, so that the entire abdominal border appears to be broadly and coarsely crenate. The parameres, although of the general *Phymata* type, are also distinctive and unlike those found in other groups of species of the genus.

Phymata acuta Stal

Phymata acuta Stal, 1860, Bidrag till Rio Janeiro trakt. Hem. fauna, vol. 1, p. 60.

One male from Chapada, Brazil.

In 1897 Handlirsch synonymized the Stal species *P. longiceps*, *P. simulans*, and *P. acuta* with *P. acutangula* Guérin, 1856, apparently not knowing the last. In 1930 Melin separated the species of Stal from *P. acutangula* Guérin, but left the two latter in synonymy with *P. longiceps* Stal. In 1951 I separated *P. simulans* Stal from *P. longiceps* Stal but, not knowing the types, left *P. acuta* as a synonym of *P. simulans* Stal. Later, through the kindness of Dr. René Malaise of the Stockholm Riksmuseum, I was privileged to see all types of Stal. They are quite distinct and each in its own right a valid species. The full synonymy and identity of these species is given in the author's "Revision of Phymatinae," still in press. All species of the *longiceps* group, to which *P. acuta* belongs, are characterized by the long head, which is at least one and a half times as long as wide across the eyes, and by a strongly dilated abdomen. *P. acuta* can be separated from *P. longiceps* and *P. simulans* by the absence of the lateral notch of the pronotum and by the evenly granulated body. From *P. peruensis* Melin, 1930, the most closely allied species, *P. acuta* can be separated by the smaller head, which is distinctly shorter than the pronotum. In *P. peruensis* the head is as long or almost as long as the pronotum.

Phymata rhynocerata Kormilev

Phymata rhynocerata Kormilev, 1957, Rev. Bras. Biol., vol. 17, p. 124, figs. 1-3.

In 1957, I described this species from one female specimen taken at Tuxtepec, Oaxaca, Mexico. The holotype is in the United States National Museum in Washington. The American Museum of Natural History has in its collection five specimens including two males, collected in the provinces of Vera Cruz and Jalisco, Mexico. One of these males I am designating as the allotype and give a short description of it below.

MALE. Slightly smaller than the female and darker in color: orange yellow; the hind disc of the pronotum, transverse band of the abdomen, meso- and meta-pleurae are chestnut brown; lateral bands of the pronotum testaceous; lateral notch of the pronotum whitish; legs greenish yellow; the tips of the lateral angles of the pronotum and abdomen are black.

Biometrical Measures. Head longer than wide across the eyes, 24/15; the proportions of the antennal segments (1-4) are 5/7/9/16; pronotum is shorter than wide across the lateral angles, 28/43; scutellum is shorter than wide at the base, 10/12; abdomen is shorter than wide across the lateral angles, 53/60; fore femora much longer than wide, 20/9.

Male. Total length 5.4 mm.; width of the pronotum 2.15 mm.; greatest width of the abdomen 3.0 mm.

Allotype, male, El Palomar, ten miles west of Tezonapa, Vera Cruz, Mexico, collected by Ray F. Smith, December 31, 1950; deposited in the American Museum of Natural History.

Specimens Examined. One male and two females from the same locality; one female, La Resolana, Jalisco, Mexico; in the same collection.

Phymata annulipes Stal

Phymata annulipes Stal, 1862, Stett. ent. Zeitg., vol. 23, p. 439.

One male, four miles southwest of Aguas Calientes, Aguas, Mexico, 6100 feet, collected by Ray Smith, October 24, 1950.

Phymata annulipes Stal is allied to *P. reticulata* Handlirsch, *P. venezuelana* Kormilev, *P. laciniata* Handlirsch, and more remotely *P. handlirshi* Champion, forming with them an "*annulipes* group." This group is characterized by the extreme development of connexivum IV (of the 5th abdominal segment), which has on the ventral side a longitudinal carina, separating the genuine connexivum from exterior portion, and which I propose to name *ultraconnexivum*. All these species are extremely rare and are known only as single or few specimens.

Phymata bipunctata Kormilev

Phymata bipunctata Kormilev, 1951, An. Soc. Cient. Arg., vol. 152, p. 174, fig. 3.

One female, Rio Vermelho, Santa Catharina, Brazil, collected by A. Maller, November, 1947.

This species was previously known from a single specimen, a female, collected in Bituruna, Parana, Brazil. The present specimen, also a female, is much darker than the holotype, having a coloration more comparable to a male: testaceous to reddish brown; the connexiva II and III with a black spot at the anterior angle; the median and hind tibiae each with two dark rings.

The systematic position of *P. bipunctata* is not very clear. It belongs to the species with very short head, and in the original description I related it with *P. andina* Melin, but it is perhaps more allied to *P. malaisei* Kormilev (in press), because it is matte, whereas *P. andina* belongs to the glossy species.

Subgenus *Phymatispa* Kormilev

Phymatispa Kormilev, 1951, Rev. Inst. Nac. Inv. Cien. Nat., Bs. As., vol. 2, p. 54.

Originally this subgenus was created for the reception of the "fortificata group" and consisted of three species: *P. fortificata* Herrich-Schaeffer, *P. argentina* Pennington, and *P. sanjuanensis* Kormilev. Later I added one more species, *Phymata (Phymatispa) paradoxa* Kormilev, 1952. The main character separating this subgenus from *Phymata* Latreille, *sensu stricto*, is found in the form of the parameres, which here are bifurcated, whereas in all other genera and subgenera of the subfamily Phymatinae they are uniramous.

Phymata (Phymatispa) paradoxa Kormilev

Phymata (Phymatispa) paradoxa Kormilev, 1952, Publ. Mision Estud. Pat. Reg. Arg., vol. 23, p. 126, fig. 2.

This striking species was described from two specimens, a male and a female, from Paraguay and Brazil, respectively. In the American Museum of Natural History is deposited a third specimen, also from Brazil.

One female, Rio Natal, Santa Catharina, Brazil, collected by A. Maller, February, 1945.

Subfamily Macrocephalinae Amyot and Serville

Genus *Macrocephalus* Swederus*Macrocephalus stali* Handlirsch

(in Part.)

Macrocephalus lepidus Stal, 1862, Stett. ent. Zeitg., vol. 23, p. 440.

Macrocephalus stali Handlirsch, 1897, Ann. Naturh. Hofmus. Wien, vol. 12, p. 195.

One male from Chapulhuacan, Hidalgo, Mexico, collected by M. Cazier, W. Gertsch, and R. Schrammel, May 20, 1952. One female, ten miles from Villa Azueta, Oaxaca, Mexico, collected by R. Smith. One female from Tegucigalpa, Honduras, collected by F. J. Dyer, June 30, 1918.

This small species is distributed in Mexico and Central America. It is closely allied to *M. lepidus* Stal and belongs to the subgenus *Lophoscutus* Kormilev, 1951.

Macrocephalus pulchellus Westwood

Macrocephalus pulchellus Westwood, 1841, Trans. Ent. Soc., London, vol. 3, p. 25.

Syrtis (Macrocephalus) pulchella Guérin, 1856, in Sagra, Hist. de Cuba, p. 406.

One female from Vinales, Cuba, September 16–22, 1913.

This is one of the smallest species in the genus, restricted to Cuba. It also belongs to the subgenus *Lophoscutus* Kormilev.

Macrocephalus leucographus Westwood

Macrocephalus leucographus Westwood, 1841, Trans. Ent. Soc., London, vol. 3, p. 25.

One male from San Turce, Puerto Rico, December 6, 1918.

This species is restricted to the West Indies, being known from Haiti, San Domingo, and now from Puerto Rico. This species also belongs to the subgenus *Lophoscutus* Kormilev.

Macrocephalus asper Stal

Macrocephalus asper Stal, 1876, Enumeratio hemipterorum, pt. 5, p. 135.

One male from Rancho Grande, Venezuela, May 4, 1945.

This rare species is known only from Venezuela. It belongs to the subgenus *Lophoscutus* Kormilev.

Macrocephalus crassimanus (Fabricius)

Syrtis crassimana Fabricius, 1803, *Systema rhyngotorum*, p. 123.

Macrocephalus crassimanus St. Fargeau and Serville, 1825, *Encycl.*, vol. 10, p. 120.

One female from Ensenada, Puerto Rico, November 13, 1925.
One female from Charlotte Amelia, St. Thomas, June 2, 1911.
One male from Talboa near Ponce, Puerto Rico, no date.

This male is very small, only 6.5 mm., whereas Handlirsch indicates the size for the Westwood specimen, also male, 9.0 mm. I cannot separate this male from the females mentioned above. *Macrocephalus crassimanus* also belongs to the subgenus *Lophoscutus* Kormilev.

***Macrocephalus insignis*, new species**

Figure 2

Male. Head relatively short (40/26); the anteocular part is narrower and almost half as long as the posterior; eyes large, semiglobose, protruding; ocelli placed nearer to the eyes than to each other (5/8); the superior and the lateral surfaces of the head covered with conspicuous, mostly black, granules; the lower border of the head behind the bucculae also granulated. Antennae relatively short; the proportion of the antennal segments (1-4) are 8(5)/6(5)/7 1/2(4)/23(8); the figures in brackets represent the maximal width of the segment; the first segment is subcylindrical, the second subglobose, the third tapering toward the base, the fourth^s robust, elongately ovate.

Pronotum shorter than wide across the humeri (47/75); the fore lobe is much shorter than the hind lobe (17/30), with dispersed, rounded granulation, black on the disc, and whitish at the borders. Foreborder deeply emarginate; anterior angles acute, dentiform, granulated and slightly divergent; lateral borders of the fore lobe slightly arcuate convex, crenulated; in the middle of the fore disc is situated a small but deep faceta. Hind disc with the antero- and postero-lateral borders slightly convex, but not crenulated; lateral angles not emarginate and forming a right angle; the disc is covered with coarse punctures but is almost without granules. (Two (1+1) short, robust, slightly divergent carinae running from the interlobal furrow to the middle of the disc, where they disappear; posterior border angularly protruding backward.

Scutellum large (105/55), reaching the tip of the abdomen, covering most of the abdomen and hemelytra, and at the base somewhat narrowed; the maximal width two-thirds of the distance from the base; the disc finely punctured, posteriorly with a sparse whitish granulation; the median carina narrow, rather obliterated, and only at the base slightly dilated and raised. The coloration of the scutellum is very characteristic, i.e., dark background with a wide, chevron-shaped, yellow, transverse band.

Hemelytra visible only as a narrow outer border of the corium.

Abdomen relatively narrow, longer than wide (85/65), slightly tapering from the base backward, and from above visible as a narrow margin. The posterior-exterior angles of the connexiva not protruding; venter with dispersed, somewhat obliterated, concolor granulation. Parameres of the *Lophoscutus* type, i.e., uniramous.

Pleurae with sparse rounded granulations; the foreborder of the propleuron crenulated.

Fore femora rather small and short (40/23), much narrowed at the base; disc convex, with dispersed dark granulations similar to those on the head and pronotum.

Coloration. Head, antennae, the hind lobe of the pronotum, chestnut brown; corium, the tip of the scutellum and the fore femora darker; the base of the scutellum fuscous; the transverse band of the scutellum, the entire ventral surface of the body (with the exception of the lateral angles of the propleurae, which are dark), the fore coxae, the median and hind legs, yellow; the fore lobe of the pronotum pale orange; tergum dark orange, almost red.

Male. Total length 6.5 mm.; width of the pronotum 2.5 mm.; width of the abdomen 2.25 mm.

Holotype, male, Rancho Grande, Venezuela, July 5, 1945; deposited in the American Museum of Natural History.

The new species belongs to the subgenus *Lophoscutus* Kormilev and is related to *Macrocephalus macilentus* Westwood. It is more robust, the lateral angles of the pronotum less acute; the lateral borders before and behind them more convex. The conspicuous black granulation of the head, pronotum, and fore femora, and the coloration of the body are also quite different.

Bibliography Cited

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(Continued from page 32)

College of Medicine spoke on "Some new and some old research in insect endocrinology", during which she reviewed the various insect endocrine organs which have known functions.

The prothoracic glands of holometabolous insects have been shown to function during immature stages, producing a growth and differentiation hormone. It is this hormone which has recently been isolated in the laboratory of Adolf Butenandt, making this the only invertebrate hormone isolated in chemically pure form at the present time.

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